

## Warfighter Interface Division (RHC)

The Warfighter Interface Division (RHC) is at the heart of human effectiveness... seamlessly linking human functionality to the weaponry, information and environment of war. Warfighter Interface Division technologies support mitigating the ambiguities of war for the men and women involved. RHC technology enables our men and women:

- to understand the nature of the battlespace
- to anticipate enemy intentions
- to make quick and effective decisions
- to synchronize air and ground forces across the battlespace

Working through the human sensory systems of vision, hearing and touch, RHC seeks to integrate the warfighter completely with his combat environment to achieve maximum understanding and awareness of any situation.

RHC develops and advances technologies such as computational and knowledge-based representations of human, organizational, cultural, and societal structures; supervisory control of uninhabited aerial vehicles; virtual audio displays; 3-D audio; human-centered decision support systems; interfaces to support human-human and human-machine collaboration, and advanced visualizations to enhance the human's ability to assimilate and understand information.



*Photo by Richard McKinley AFRL/RHCB*

The Auditory Localization Facility (ALF) at AFRL's Human Effectiveness Directorate, Warfighter Interface Division, enables research in binaural and spatial hearing and 3-D audio systems.



*Photo by Chris Gulliford AFRL/RH*

Second Lt. Andrew T. Sunderland (right) shows General Bruce Carlson, commander of Air Force Materiel Command at Wright-Patterson AFB, how AFRL has improved battlefield air operations equipment to help Air Force and Army warfighters communicate with each other in the field.

## RHC Mission

The mission of the Warfighter Interface Division is to conceive, develop and transition technology to promote optimal decision making by commanders, operators and support personnel.

RHC's vision is to tip the scales of war in our favor via revolutionary human-human and human-machine interface solutions. RHC technology lets our combat forces better utilize their weapons systems on the battlefield, and our decision-makers to perform at levels previously unattainable.

## RHC Organization

**Battlespace Acoustics Branch (RHCB):** The mission of the Battlespace Acoustics Branch is to conduct research and develop technologies and procedures that demonstrate and evaluate revolutionary auditory displays and interface systems to optimize the performance and safety of military personnel across the Battlespace.

**System Control Interfaces Branch (RHCI):** The mission of the System Control Interfaces Branch (RHCI) is to advance research methods for establishing crew system design requirements and demonstrate, in simulation and flight test, and how integration of human-computer interface technologies improves weapon system effectiveness.

**Collaborative Interfaces Branch (RHCP):** The mission of the Collaborative Interfaces Branch is to conduct research and develop technologies and procedures that demonstrate and evaluate optimum interface technology that revolutionizes human-human and human-machine collaboration in a network-centric warfare environment.

**Cognitive Systems Branch (RHCS):** The mission of the Cognitive Systems Branch (RHCS) is to research and develop computational and knowledge-based representations of human, organizational, cultural, and societal structures and behavior to assess cascading effects of military operations, and to develop work-centered decision-making support systems that complement and augment natural human perceptual and cognitive mechanisms

**Battlespace Visualization Branch (RHCV):** The mission of the Battlespace Visualization Branch is to enhance warfighter vision and visual interfaces to improve weapon system effectiveness during day and night operations.



*Photo illustration by Gary Rankin, AFRL/RHC*

**Researchers test various collaborative interfaces in the Collaborative Technology Testbed.**

## For more information contact...

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